Access DB# 79961

# SEARCH REQUEST FORM

**Scientific and Technical Information Center**

Requester's Full Name: CRIS RODRIGUEZ Examiner #: 73164 Date: 11/12/02
Art Unit: 3763 Phone Number 308-2194 Serial Number: 09/880,241
Mail Box and Bldg/Room Location: 3D25 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

**********

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: 4/12/96

***For Sequence Searches Only*** *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

method for treating an aneurysm
- injecting a ~~cross~~ crosslinking solution such as an aldehyde, glutaraldehyde or carbodiimide

**********

**STAFF USE ONLY**

Searcher: JEANNE HOURIGAN
Searcher Phone #: 305-5934
Searcher Location: CP2-9C08
Date Searcher Picked Up: 11-18
Date Completed: 11-18
Searcher Prep & Review Time: 127
Clerical Prep Time: _____
Online Time: 38

PTO-1590 (8-01)

**Type of Search**

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) _____
Bibliographic ✓
Litigation _____
Fulltext ✓
Patent Family _____
Other _____

**Vendors and cost where applicable**

STN ✓
Dialog ✓
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

11:40 - 2:35

November 18, 2002

TO: Cris Rodriguez, Art Unit 3763
CP2, Room 3-D-25

FROM: Jeanne Horrigan, EIC-3700

SUBJECT: Search Results for Serial #09/880241

Attached are the search results for the "Method and Apparatus for Treating Aneurysms," including results of prior art and inventor searches in foreign patent databases, and prior art searches in medical, pharmaceutical, chemical, and general sci/tech non-patent databases.

In the results, a highlighted line marks the end of a search, including the search strategy, in a particular set of databases and the beginning of a new search in a different set of databases.

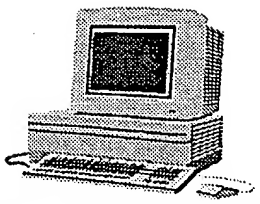
I tagged the items that seemed to me to be most relevant, but **I suggest that you review all of the results**.

Also attached is a "*Search Results Feedback Form*." Your feedback will help enhance our search services.

I hope these results are useful. Please let me know if you would like me to expand or modify the search or if you have any questions.

# EIC3700/2900

## Search Results Feedback Form (Optional)



Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please ***contact the EIC searcher who performed your search (or either of us):***

**John Sims, Team Leader, 308-4836, CP2-2C08**
**or Jeanne Horrigan, Searcher, 305-5934**

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*Voluntary Results Feedback Form*

- *I am an examiner in Workgroup:* ☐ *Example:* 3740

- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

  *Types of relevant prior art found:*
  - ☐ Foreign Patent(s)
  - ☐ Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found**:*
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Search results were not useful in determining patentability or understanding the invention.

**Other Comments:**

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Drop off completed forms in the inbox, EIC 3700/2900, CP2-2C08, or in CPK1-5A02. **Thanks!**

3/26,TI/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014154372
WPI Acc No: 2001-638591/200173
Stent and graft device for treating aneurysmal wall of bodily vessel, contains crosslinking solution pumped out through lumen and port toward proximal end of catheter

3/26,TI/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014131524
WPI Acc No: 2001-615735/200171
Reduced diameter flexible stent deployment catheter, slidably inserts insertion sheath in inner tube to state in which it is not restrained at any location in inner tube during use of insertion sheath

3/26,TI/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
013759410
WPI Acc No: 2001-243622/200125
Bifurcated graft for branched vascular passageway in curing aortic aneurysms , has tube with split in center, forming branches in contact with passageway branches

3/26,TI/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
012784925
WPI Acc No: 1999-591151/199950
Reduced friction graft and stent or graft deployment catheter for repairing defects in arteries and other lumens

3/26,TI/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
012520213
WPI Acc No: 1999-326319/199927
Invertible bifurcated, bilateral intra-aortic bypass stent or graft for intraluminal delivery, and deployment method

5/7/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014154372 **Image available**
WPI Acc No: 2001-638591/200173
Stent and graft device for treating aneurysmal wall of bodily vessel, contains crosslinking solution pumped out through lumen and port toward proximal end of catheter
Patent Assignee: LESCHINSKY B (LESC-I)
Inventor: LESCHINSKY B
Number of Countries: 001 Number of Patents: 001
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| US 20010029349 | A1 | 20011011 | US 96631337 | A | 19960412 | 200173 | B |

US 98165333 A 19981001
US 2001880241 A 20010613

Priority Applications (No Type Date): US 2001880241 A 20010613; US 96631337 A 19960412; US 98165333 A 19981001

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| US 20010029349 | A1 | | 13 | A61M-029/00 | Cont of application US 96631337<br>CIP of application US 98165333 |

Abstract (Basic): US 20010029349 A1

NOVELTY - Stent and graft device has a catheter (31B) with a longitudinal axis and lumen(s). A distal end of the catheter is connected to a crosslinking solution. An infusion and vacuum port pumps out crosslinking solution through the lumen and port toward the proximal end of the catheter for crosslinking at least a portion of the vessel.

USE - Used for treating an aneurysmal wall of a bodily vessel (claimed).

ADVANTAGE - The device provides crosslinking solution that strengthens or toughens the aneurysmal wall by changing the nature of the wall, i.e. crosslinking the collagen in the wall.

DESCRIPTION OF DRAWING(S) - The figure is a longitudinal cross-sectional view of the catheter.

Catheter (31B)

Occlusion balloons (34, 35)

pp; 13 DwgNo 6/7

Derwent Class: B05; B07; P34

International Patent Class (Main): A61M-029/00

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200273
File 344:Chinese Patents Abs Aug 1985-2002/Oct
File 347:JAPIO Oct 1976-2002/Jul(Updated 021104)
File 371:French Patents 1961-2002/BOPI 200209

| Set | Items | Description |
|---|---|---|
| S1 | 32 | AU='LESCHINSKY':AU='LESCHINSKY BORIS' |
| S2 | 1280 | ANEURYSM? |
| **S3** | **5** | **S1 AND S2** |
| S4 | 102281 | ALDEHYDE? |
| **S5** | **1** | **S1 AND S4** |

4/3,AB/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00518438
REDUCED FRICTION GRAFT AND STENT/GRAFT DEPLOYMENT CATHETER
GREFFON A FROTTEMENT REDUIT ET CATHETER POUR DEPLOIEMENT DE STENT OU GREFFON

Patent Applicant/Assignee:
DATASCOPE INVESTMENT CORP,
LESCHINSKY Boris,
AHARI Frederick,

Inventor(s):
LESCHINSKY Boris ,
AHARI Frederick

Patent and Priority Information (Country, Number, Date):
Patent: WO 9949790 A1 19991007
Application: WO 99US7125 19990330 (PCT/WO US9907125)

Priority Application: US 9850148 19980330
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 4598
English Abstract

A low friction stent/graft (30) deployment catheter comprising a low friction graft having an outer coating (90) of a biocompatible lubricous material, such as Dow Corning's medical silicone (360), and a delivery sheath (42) having an inner coating (80) of a biocompatible lubricous material, such as Dow Corning's MDX4-4159.

File 348:EUROPEAN PATENTS 1978-2002/Nov W02
File 349:PCT FULLTEXT 1979-2002/UB=20021114,UT=20021107

| Set | Items | Description |
|---|---|---|
| S1 | 0 | PN=US 20010029349 |
| S2 | 18 | AU='LESCHINSKY BORIS':AU='LESCHINSKY BORIS C O DATASCOPE I-NVESTMENT CORP' |
| S3 | 164541 | ANEURYSM? OR ALDEHYDE? OR CROSS()LINK???? OR CROSSLINK???? |
| **S4** | **1** | **S2 AND S3** |

4/6/1 (Item 1 from file: 155)
07499299 92900985 PMID: 10171158
Centrifugal blood pumps--a brief analysis: development of new designs.
1991

4/6/2 (Item 1 from file: 5)
13392838 BIOSIS NO.: 200200021659
Bubble-free connector for liquid carrying tubing
1995

4/6/3 (Item 2 from file: 5)
13391754 BIOSIS NO.: 200200020575
Single roller blood pump and oxygenator system
1995

4/6/4 (Item 1 from file: 73)
00233363 EMBASE No: 1975005598
The fibroglial component of astrocytomas (Russian)
1974

File 155:MEDLINE(R) 1966-2002/Nov W2
File 5:Biosis Previews(R) 1969-2002/Nov W2
File 73:EMBASE 1974-2002/Nov W2
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Nov W3
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

| Set | Items | Description |
|---|---|---|
| S1 | 25 | AU='LESCHINSKY B':AU='LESCHINSKY BORIS' |
| S2 | 19 | S1/2002 OR S1/2001 OR S1/2000 OR S1/1999 OR S1/1998 OR S1/-1997 |
| S3 | 6 | S1 NOT S2 |
| **S4** | **4** | **RD (unique items)** |

L26 ANSWER 1 OF 37 MEDLINE
AN 2002620467 IN-PROCESS
TI Preparation and biocompatibility of tissue-engineered scaffold materials based on collagen.

L26 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:319775 HCAPLUS
DN 134:316164
TI Vessel embolic material comprising hydrogel and therapy with the use thereof

L26 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AN 2001:378767 HCAPLUS
DN 135:150416
TI Factor XIII of blood coagulation as a nuclear ***crosslinking*** enzyme

L26 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
AN 2001:312356 HCAPLUS
DN 135:157631
TI The role of ***crosslinking*** in modification of the immune response elicited against xenogenic vascular acellular matrixes

L26 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:104875 HCAPLUS
DN 132:255935
TI Blood compatibility of polyurethane-poly(vinyl alcohol) polymer blends

L26 ANSWER 6 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 3
AN 2000040578 EMBASE
TI Modified human ureter and human saphenous vein grafts tanned with a polyepoxy compound or ***glutaraldehyde*** for small-diameter arterial substitution: An experimental study.

L26 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:722931 HCAPLUS
DN 131:342013
TI Hydrogels containing radiopaque agent and drugs for the treatment of ***aneurysms***

L26 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 4
AN 1998:662220 HCAPLUS
DN 129:298199
TI Effect of ***phenylglyoxal*** -modified .alpha.2-antiplasmin on urokinase-induced fibrinolysis

L26 ANSWER 9 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 1998321692 EMBASE
TI Interaction of the A1 subunit of factor VIIIa and the serine protease domain of factor X identified by zero-length ***cross*** - ***linking*** .

L26 ANSWER 10 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 97349216 EMBASE
TI Interacting regions in the A1 and A2 subunits of factor VIIIa identified by zero-length ***cross*** - ***linking*** .

L26 ANSWER 11 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 97040312 EMBASE
TI Localization of a factor X interactive site in the A1 subunit of factor VIIIa.

L26 ANSWER 12 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 97139837 EMBASE
TI Covalent linkage of recombinant hirudin to poly(ethylene terephthalate) (Dacron): Creation of a novel antithrombin surface.

L26 ANSWER 13 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1997:14781 BIOSIS
TI Albumin as a sealant for a polyester vascular prosthesis: Its impact on the healing sequence in humans.

L26 ANSWER 14 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96345182 EMBASE
TI Albumin-impregnated polyester vascular prosthesis for abdominal aortic surgery: An improvement?.

L26 ANSWER 15 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 95119978 EMBASE
TI Poly ethylene heparin immobilized chitosan-polyethylene glycol interpenetrating network: Antithrombogenicity.

L26 ANSWER 16 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94103992 EMBASE
TI Drug release through fibrinolysis of antibiotic-bound fibrin.

L26 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 5
AN 1994:173409 HCAPLUS
DN 120:173409
TI Immobilization of poly(ethylene glycol) onto a poly(vinyl alcohol) hydrogel: 2. Evaluation of thrombogenicity

L26 ANSWER 18 OF 37 MEDLINE
AN 92287778 MEDLINE
TI Comparative evaluation of the elasticity and flexibility of bioimpregnated knitted grafts.

L26 ANSWER 19 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 92105160 EMBASE
TI Physical and biochemical characterization of five commercial resins for immunoaffinity purification of factor IX.

L26 ANSWER 20 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V. DUPLICATE 6
AN 92079338 EMBASE
TI Results with cryopreserved and ***glutaraldehyde*** -preserved allograft trachea as an arterial conduit.

L26 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:11675 HCAPLUS
DN 118:11675
TI Chemically modified collagenous amniotic layer as a wound dressing material

L26 ANSWER 22 OF 37 MEDLINE DUPLICATE 7

AN 88264724 MEDLINE
TI ***Glutaraldehyde*** release from vascular prostheses of biologic origin.

L26 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:230522 HCAPLUS
DN 104:230522
TI Adapting soluble bone protein for use in stimulating osteoinduction

L26 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 8
AN 1986:18323 HCAPLUS
DN 104:18323
TI The borohydride-reducible compounds of human aortic elastin. Demonstration of a new cyclic amino acid in alkali hydrolysate, and changes with age and in patients with annulo-aortic ectasia including one with Marfan syndrome

L26 ANSWER 25 OF 37 MEDLINE DUPLICATE 9
AN 84103349 MEDLINE
TI Biodegradation and ***aneurysm*** formation in umbilical vein grafts. Observations and a realistic strategy.

L26 ANSWER 26 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 83045225 EMBASE
TI Factor VIII-induced superaggregation of human platelets.

L26 ANSWER 27 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 10
AN 82047844 EMBASE
TI Morphologic and biophysical assessment of long term human umbilical cord vein implants used as vascular conduits.

L26 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:162794 HCAPLUS
DN 94:162794
TI Biologically compatible materials by surface immobilization of apyrase

L26 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1980:465443 HCAPLUS
DN 93:65443
TI Removal of heparin from blood plasma samples using an insoluble protamine reaction product

L26 ANSWER 30 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 79251333 EMBASE
TI ***Glutaraldehyde*** -stabilized umbilical vein prosthesis for revascularization of the legs. Three year results by life table analysis.

L26 ANSWER 31 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 78276540 EMBASE
TI Porcine Willebrand factor: a population of multimers.

L26 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1978:94777 HCAPLUS
DN 88:94777
TI Gelatin-resorcin- ***formaldehyde*** adhesive in vascular surgery

L26 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 11

AN 1974:93864 HCAPLUS
DN 80:93864
TI Sex-linked defect in the ***crosslinking*** of collagen and elastin associated with the mottled locus in mice

L26 ANSWER 34 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 75042956 EMBASE
TI Lathyrism: A review.

L26 ANSWER 35 OF 37 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 74009322 EMBASE
TI Plasma kallikrein kinin system in nonmammalian blood: evolutionary aspects.

L26 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1973:476472 HCAPLUS
DN 79:76472
TI Application of an insoluble Hageman factor complex to kinin research

L26 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1969:462044 HCAPLUS
DN 71:62044
TI Antithrombogenic properties of modified polymers in cardiovascular surgery

L29 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:319775 HCAPLUS
DN 134:316164
TI Vessel embolic material comprising hydrogel and therapy with the use thereof

L29 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AN 2001:312356 HCAPLUS
DN 135:157631
TI The role of ***crosslinking*** in modification of the immune response elicited against xenogenic vascular acellular matrixes

L29 ANSWER 3 OF 15 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 2
AN 2000040578 EMBASE
TI Modified human ureter and human saphenous vein grafts tanned with a polyepoxy compound or ***glutaraldehyde*** for small-diameter arterial substitution: An experimental study.

L29 ANSWER 5 OF 15 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1997:14781 BIOSIS
TI Albumin as a sealant for a polyester vascular prosthesis: Its impact on the healing sequence in humans.

L29 ANSWER 6 OF 15 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96345182 EMBASE
TI Albumin-impregnated polyester vascular prosthesis for abdominal aortic surgery: An improvement?.

L29 ANSWER 7 OF 15 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 3
AN 92079338 EMBASE
TI Results with cryopreserved and ***glutaraldehyde*** -preserved allograft trachea as an arterial conduit.

L29 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 5
AN 1986:18323 HCAPLUS
DN 104:18323
TI The borohydride-reducible compounds of human aortic elastin. Demonstration of a new cyclic amino acid in alkali hydrolysate, and changes with age and in patients with annulo-aortic ectasia including one with Marfan syndrome

L29 ANSWER 11 OF 15 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 7
AN 82047844 EMBASE
TI Morphologic and biophysical assessment of long term human umbilical cord vein implants used as vascular conduits.

L29 ANSWER 12 OF 15 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 79251333 EMBASE
TI ***Glutaraldehyde*** -stabilized umbilical vein prosthesis for revascularization of the legs. Three year results by life table analysis.

L29 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2002 ACS
AN 1978:94777 HCAPLUS
DN 88:94777
TI Gelatin-resorcin- ***formaldehyde*** adhesive in vascular surgery

L29 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 8
AN 1974:93864 HCAPLUS
DN 80:93864
TI Sex-linked defect in the ***crosslinking*** of collagen and elastin associated with the mottled locus in mice

L29 ANSWER 15 OF 15 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 75042956 EMBASE
TI Lathyrism: A review.

L29 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:722931 HCAPLUS
DOCUMENT NUMBER: 131:342013
**TITLE:** **Hydrogels containing radiopaque agent and drugs for the treatment of ***aneurysms***
INVENTOR(S): Derbin, J. Todd; Ken, Christopher G. M.
PATENT ASSIGNEE(S): Micrus Corporation, USA
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9956783 | A1 | 19991111 | WO 1999-US9492 | 19990429 |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9936734 A1 19991123 AU 1999-36734 19990429

EP 1100541 A1 20010523 EP 1999-918935 19990429

R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE, IE

JP 2002531379 T2 20020924 JP 2000-546807 19990429

PRIORITY APPLN. INFO.: US 1998-71250 A 19980501

WO 1999-US9492 W 19990429

AB The hydrogel for the treatment of ***aneurysms*** acts as a carrier for both a radiopaque agent allowing the hydrogel to be visualized under fluoroscopy and a therapeutic agent such as one or more human growth factors. The hydrogel is delivered through a catheter into the ***aneurysm*** , where the hydrogel becomes more viscous upon reaching body temp., or upon exposure to bodily fluids, to block blood flow into the ***aneurysm*** . In addn. to stopping blood flow into the ***aneurysm*** , the delivery of human growth factors to the ***aneurysm*** site promotes the growth of a cellular layer across the neck of the ***aneurysm*** . The hydrogel may be of a type that dissolves over time or one which remains as a permanent occlusive agent within the ***aneurysm*** . The radiopaque material that is incorporated into the hydrogel of is preferably fine particles of a selected radiopaque metal, such as gold, platinum, tantalum or the like.

IC ICM A61K047-30

ICS A61K047-32; A61K047-34; A61K047-36; A61K047-38; A61K038-18; A61K038-20; A61K039-395; A61K033-24; A61K047-02; A61K038-18; A61K033-24; A61K038-20; A61K033-24; A61K039-395; A61K033-24

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

ST ***aneurysms*** hydrogel radiopaque drug

IT Polymers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (biodegradable; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Polyesters, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (caprolactone-based; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Medical goods

(catheters; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Imaging agents

(contrast, radiog.; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Collagens, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) ( ***crosslinked*** , acrylate-; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Polyesters, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (dilactone-based; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Drug delivery systems

(gels; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT ***Aneurysm***

Drugs

(hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Acrylic polymers, biological studies
Albumins, biological studies
Collagens, biological studies
Fibrins
Fibronectins
Gelatins, biological studies
Growth factors, animal
Interleukins
Mucopolysaccharides, biological studies
Ovalbumin
Platelet-derived growth factors
Polyanhydrides
Polyesters, biological studies
Polymers, biological studies
Polyoxyalkylenes, biological studies
Polyphosphazenes
Polysaccharides, biological studies
Proteins, general, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Drug delivery systems
(hydrogels; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactic acid-based; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Polyethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ortho ester group-contg.; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Polyoxyalkylenes, biological studies
Polyoxyalkylenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyester-; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Polyesters, biological studies
Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyoxyalkylene-; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT Transforming growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT 113676-97-4
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(di- or triblock; hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

IT 79-10-7D, Acrylic acid, esters, polymers 79-41-4D, MethAcrylic acid,

esters, polymers 1309-37-1, Iron oxide (Fe2O3), biological studies 1344-28-1, Aluminum oxide (Al2O3), biological studies 7440-06-4, Platinum, biological studies 7440-25-7, Tantalum, biological studies 7440-57-5, Gold, biological studies 7631-86-9, Silica, biological studies 9000-69-5, Pectin 9002-18-0, Agar 9002-89-5, Poly(vinyl alcohol) 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9004-32-4, Carboxymethyl cellulose sodium salt 9004-34-6D, Cellulose, derivs., biological studies 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-49-6, Heparin, biological studies 9007-28-7, Chondroitin sulfate 9050-30-0, Heparan sulfate 24980-41-4, Poly(.epsilon.-caprolactone) 25068-14-8, Poly( ***acrolein*** ) 25248-42-4, Poly[oxy(1-oxo-1,6-hexanediyl)] 25322-68-3 25805-17-8, Polyethyloxazoline 26009-03-0, Poly(glycolic acid) 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Poly(lactic acid) 26124-68-5, Poly(glycolic acid) 26161-42-2 26354-94-9, Poly(.delta.-valerolactone) 26499-05-8, Poly[oxy(1-oxo-1,5-pentanediyl)] 26780-50-7, Glycolide-lactide copolymer 26811-96-1, Poly(L-lactic acid) 28728-97-4, Poly(.gamma.-butyrolactone), SRU 29223-92-5 31213-03-3, Poly(.gamma.-butyrolactone) 31621-87-1, Poly(dioxanone) 106392-12-5, Polyethylene glycol-polypropylene glycol block copolymer
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydrogels contg. radiopaque agent and drugs for treatment of ***aneurysms*** )

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 8 OF 15 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 88264724 MEDLINE
DOCUMENT NUMBER: 88264724 PubMed ID: 3133800
**TITLE:** *****Glutaraldehyde*** release from vascular prostheses of biologic origin.**
AUTHOR: Wiebe D; Megerman J; L'Italien G J; Abbott W M
CORPORATE SOURCE: Vascular Research Laboratory, Massachusetts General Hospital, Boston, Mass. 02114.
CONTRACT NUMBER: HL34786 (NHLBI)
SOURCE: SURGERY, (1988 Jul) 104 (1) 26-33.
Journal code: 0417347. ISSN: 0039-6060.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198808
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19880804

AB The inhibition of growth by adult human venous endothelial cells in culture forms the basis of a sensitive assay of ***glutaraldehyde*** (GA) concentration, valid between 0 and 5 parts per million. This cytotoxicity assay was used to measure residual (unbound) GA in commercial vascular prostheses of biologic origin following manufacturer-recommended rinsing procedures, from which as much as 13.8 ppm GA per gram of tissue per 24 hours continued to be released after 1 month. A brief (1 hour) exposure of cultured endothelial cells to 2 ppm GA delayed growth, while continuous exposure to 4 ppm totally prevented growth for at least 12 days. Endothelial cells exposed to GA demonstrated a reduced efficiency of attachment to standard test surfaces, although prior GA treatment of these

surfaces was not detrimental to subsequent cell attachment. GA release from vascular prostheses may contribute to their lack of endothelial cell coverage in human implants and may be indicative of collagen ***cross*** - ***link*** instability. If so, in vitro cytotoxicity may be helpful in identifying the potential for ***aneurysm*** formation in preserved biologic grafts.

CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
*Aldehydes: TO, toxicity
*Bioprosthesis: AE, adverse effects
*Blood Vessel Prosthesis: AE, adverse effects
Cell Adhesion: DE, drug effects
Cell Survival: DE, drug effects
Cells, Cultured
Dose-Response Relationship, Drug
*Endothelium, Vascular: DE, drug effects
*** Glutaral: PK, pharmacokinetics***
****Glutaral: TO, toxicity***
Saphenous Vein
Thymidine: AI, antagonists & inhibitors

RN ***111-30-8 (Glutaral)*** ; 50-89-5 (Thymidine)
CN 0 (Aldehydes)

L29 ANSWER 10 OF 15 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 84103349 MEDLINE
DOCUMENT NUMBER: 84103349 PubMed ID: 6691733
**TITLE:** **Biodegradation and ***aneurysm*** formation in umbilical vein grafts. Observations and a realistic strategy.**
AUTHOR: Dardik H; Ibrahim I M; Sussman B; Kahn M; Sanchez M; Klausner S; Baier R E; Meyer A E; Dardik I I
SOURCE: ANNALS OF SURGERY, (1984 Jan) 199 (1) 61-8. Journal code: 0372354. ISSN: 0003-4932.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198402
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19840222

AB In a series of 756 ***glutaraldehyde*** -stabilized umbilical vein grafts implanted over a 7 1/2-year period, ***aneurysms*** were identified in seven cases. The earliest ***aneurysm*** was seen at 31 months after implantation and the remainder between 43 and 79 months after surgery. Corrective surgery was performed in five cases and succeeded in four. **Although definite mechanisms have not been identified, mechanical fatigue, reversal of ***aldehyde*** ***crosslinks*** , and immunologic factors may be operative.** The pathologic changes include: (1) actual dilation of both graft and mesh with or without intraluminal thrombus and, (2) maintenance of graft diameter with erosion of the umbilical vein and polyester mesh rupture leading to perigraft hematoma and false ***aneurysm*** formation. Microscopic examination and infrared spectral analysis confirmed the presence of host-contributed lipid in some specimens. Although this is a low incidence of ***aneurysm*** formation, umbilical vein grafts should be selected primarily for patients with limited life expectancy or for whom alternative materials with comparable or superior patency rates are not

available or acceptable. Periodic angiography, particularly after 3 or 4 years, is recommended as a routine part of follow-up examinations. Improved graft materials and control of host environmental factors are potential means to reduce the noted degradation.

CT Check Tags: Female; Human; Male
****Aneurysm: ET, etiology***
*** Aneurysm: SU, surgery***
Arteries: SU, surgery
Biodegradation
*Bioprosthesis: AE, adverse effects
*Blood Vessel Prosthesis: AE, adverse effects
Intermittent Claudication: SU, surgery
*Leg: BS, blood supply
Middle Age
Postoperative Complications
*Umbilical Veins: TR, transplantation

(FILE 'HOME' ENTERED AT 12:07:55 ON 18 NOV 2002)
FILE 'REGISTRY' ENTERED AT 12:08:13 ON 18 NOV 2002

E ACETALDEHYDE/CN
L1 1 S E3
E PARALDEHYDE/CN
L2 1 S E3
E ACROLEIN/CN
L3 1 S E3
E BENZALDEHYDE/CN
L4 1 S E3
E FORMALDEHYDE/CN
L5 1 S E3
E FORMOCRESOL/CN
L6 1 S E3
E FURALDEHYDE/CN
L7 1 S E3
E GLUTARAL/CN
L8 1 S E3
E GLYCERALDEHYDE/CN
L9 1 S E3
E GLYOXAL/CN
L10 1 S E3
E PHENYLGLYOXAL/CN
L11 1 S E3
E PYRUVALDEHYDE/CN
L12 1 S E3
E MALONDIALDEHYDE/CN
L13 1 S E3
E THIOBARBITURIC ACID/CN
L14 1 S E3
E O PHTHALDEHYDE/CN
E RETINALDEHYDE/CN
L15 1 S E3
E CARBODIIMIDE/CN
L16 1 S E3
E CYANAMIDE/CN
L17 1 S E3
E CYANOGENAMIDE/CN
L18 1 S E3

FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS' ENTERED AT 12:11:54 ON 18 NOV 2002

| | | |
|---|---|---|
| L19 | 657573 | S ?ALDEHYDE OR ACROLEIN OR FORMOCRESOL? OR GLUTARAL OR GLYOXAL |
| L20 | 53027 | S THIOBARBITURIC ACID OR CARBODIIMIDE OR CYANAMIDE OR CYANOGENA |
| L21 | 210161 | S ANEURYSM? OR BLOOD CLOT? |
| L22 | 359009 | S CROSS LINK? OR CROSSLINK? |
| L23 | 240371 | S L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR L10 OR |
| L24 | 732706 | S L19 OR L20 OR L23 |
| L25 | 59 | S L21 AND L22 AND L24 |
| **L26** | **37** | **DUPLICATE REMOVE L25 (22 DUPLICATES REMOVED)** |
| L27 | 137763 | S ANEURYSM? |
| L28 | 29 | S L24 AND L22 AND L27 |
| **L29** | **15** | **DUPLICATE REMOVE L28 (14 DUPLICATES REMOVED)** |

7/6,K/1 (Item 1 from file: 144)
DIALOG(R)File 144:(c) 2002 INIST/CNRS. All rts. reserv.
15086485 PASCAL No.: 01-0246131
The role of crosslinking in modification of the immune response elicited against xenogenic vascular acellular matrices
2001

...in a canine model, this AMVP shows excellent handling characteristics, low thromboreactivity, no evidence of **aneurysm**, and exceptional graft patency in the peripheral vasculature. As a first step in the development... ... mononuclear cells into the media and adventitia. To modify the immune response, we applied three crosslinking techniques to the canine AMVPs: glutaraldehyde, polyglycidyl ether, and carbodiimide . All crosslinkers significantly reduced degradation and cellular infiltration of the prostheses. However, crosslinking neither eliminated the chronic inflammatory response surrounding the implants nor reduced the humoral response to...
English Descriptors: Crosslinking ; Immunogenicity; Biocompatibility; Implanted material; Heterograft; Prosthesis; Animal; Rat; Dog; Caprine

7/7/2 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01064753 Genuine Article#: FT762 Number of References: 48
Title: HETEROZYGOUS MUTATION IN THE G+5 POSITION OF INTRON-33 OF THE PRO-ALPHA-2(I) GENE (COL1A2) THAT CAUSES ABERRANT RNA SPLICING AND LETHAL OSTEOGENESIS IMPERFECTA - USE OF CARBODIIMIDE METHODS THAT DECREASE THE EXTENT OF DNA SEQUENCING NECESSARY TO DEFINE AN UNUSUAL MUTATION
Author(s): GANGULY A; BALDWIN CT; STROBEL D; CONWAY D; HORTON W; PROCKOP DJ
Corporate Source: THOMAS JEFFERSON UNIV,JEFFERSON INST MOLEC MED,DEPT BIOCHEM & MOLEC BIOL/PHILADELPHIA//PA/19107; THOMAS JEFFERSON UNIV,JEFFERSON INST MOLEC MED,DEPT BIOCHEM & MOLEC BIOL/PHILADELPHIA//PA/19107; UNIV TEXAS,HLTH SCI CTR,DEPT PEDIAT/HOUSTON//TX/77225
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N18, P12035-12040
Language: ENGLISH Document Type: ARTICLE
Abstract: Cultured skin fibroblasts from a proband with osteogenesis imperfecta were found to synthesize normal and shortened alpha-2(I) chains of type I procollagen. A cDNA library was prepared using mRNA isolated from the proband's fibroblasts. Partial nucleotide sequencing of five clones demonstrated that two clones lacked the 54 base pairs (bp) of coding sequences found in exon 33 of the pro-alpha-2(I) gene (COL1A2). To reduce the amount of nucleotide sequencing required, heteroduplexes were prepared from two of the clones, one normal and the other lacking exon 33, and reacted with a water-soluble carbodiimide under conditions in which nonbase-paired G and T nucleotides are specifically modified by the reagent. Analysis of the heteroduplexes by immunoelectron microscopy suggested that the sequence variation near the codons of exon 33 was the only sequence difference in the cDNA clones. Amplification of cDNA from the proband by polymerase chain reaction gave products of two sizes, one of the expected size for the normal sequence and the other of the expected size for a product lacking the 54 bp in exon 33. To define the mutation in genomic DNA, a 1.6-kilobase region spanning exons 32 and 34 was amplified by the polymerase chain reaction and DNA heteroduplexes were prepared from the

products. The heteroduplexes were treated with a water-soluble carbodiimide and then used as templates for primer extension under conditions in which extension terminates at the site of a carbodiimide -modified base. The results suggested a mismatch near the exon-intron boundary of exon 33 and a second mismatch near the 3' end of intron 33. Nucleotide sequencing of the polymerase chain reaction products revealed a single-base substitution in one allele that changed the moderately conserved G at position +5 of the 5' splice site of intron 33 to an A. In addition, there was an apparently neutral single-base substitution that placed both a G and T at position +661 of intron 33. The results provide only the third example of a mutation in the G at the +5 position of an intron that causes aberrant RNA splicing. Also, the results demonstrate that use of techniques involving carbodiimide modification of DNA heteroduplexes can reduce the amount of nucleotide sequencing necessary to define mutations in large and complex genes.

7/7/3 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2002 Inst for Sci Info. All rts. reserv.
00802752 Genuine Article#: EY016 Number of References: 43
Title: A LABORATORY MODEL TO QUANTITATE THE RESISTANCE OF COLLAGEN VASCULAR GRAFTS TO BIODEGRADATION
Author(s): MEGERMAN J; REDDY E; LITALIEN GJ; WARNOCK DF; ABBOTT WM
Corporate Source: MASSACHUSETTS GEN HOSP,SURG SERV,VASC RES LAB,ACC 458/BOSTON//MA/02114; HARVARD UNIV,SCH MED,DEPT SURG/BOSTON//MA/02115; UNIV NATAL,FAC MED,DEPT SURG/CONGELLA 4013//SOUTH AFRICA/
Journal: JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, 1991, V25, N3, P295-313
Language: ENGLISH Document Type: ARTICLE
Abstract: Recent reports have shown that despite extensive preclinical testing, vascular grafts of biological origin undergo severe biodegradation and **aneurysm** formation after two or more years of implantation in man. The purpose of this study was to develop a laboratory model to quantitate and correlate the stability of crosslinked collagen grafts in vitro and in vivo. This resistance to biodegradation was assessed by measuring changes in suture pullout force and sample weight in response to controlled digestion with bacterial collagenase, in 0.5-cm-long cylindrical graft segments (chemically processed bovine carotid artery and human umbilical cord vein) that were implanted in the rat subcutis for 2 to 12 weeks. Scar tissue was removed from the explants by brief enzymatic digestion, a process that was inhibited when graft segments had become infected. Changes in dry weight were more consistent than were changes in wet weight; drying the graft segments had no effect on their degradation in vivo or in vitro. Intact cylindrical rings suffered somewhat less damage than did opened, flattened cylinders. Graft degradation increased markedly with implantation time, and was detected after only 3 weeks. We conclude that the rat subcutis model, when combined with controlled enzymatic digestion, first to remove scar tissue and then to challenge structural integrity, provides an accelerated assay by which to predict the stability of collagen vascular grafts.

7/7/4 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus
(c)2002 Japan Science and Tech Corp(JST). All rts. reserv.
00578240 JICST ACCESSION NUMBER: 88A0179263 FILE SEGMENT: JICST-E
Cross - linking amino acids in elastin - With special reference to

neodesmosine, a new amino acid.
NAGAI YASUSHI (1); SATO MASAO (1); SASAKI MISAO (1); EBINA SATOSHI (1)
(1) Fukushimaken'idai Chuken
Fukushima Igaku Zasshi(Fukushima Medical Journal), 1987, VOL.37,NO.2, PAGE.159-166, FIG.9, TBL.2, REF.28
JOURNAL NUMBER: F0689AAQ ISSN NO: 0016-2582 CODEN: FSIZA
UNIVERSAL DECIMAL CLASSIFICATION: 577.112.012
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Review article
MEDIA TYPE: Printed Publication
ABSTRACT: The elastic properties of various tissues, including lung, aorta, ligament and skin, have so far been shown to depend on the presence of connective tissue protein, elastin. The intermolecular cross - links in elastin play a crucial role in determining its elasticity and insolubility. The unique amino acids, desmosine and isodesmosine were first discovered as cross - links in elastin by Partridge et al. in 1963. Several others have since been found. Recently, we have isolated an unknown amino acid from bovine ligament elastin. The UV-, and NMR-spectroscopic examination shows that the compound is a pyridinium derivative with three amino acid side chains, 1-(5-amino-5-carboxypentyl)-3,5-bis-(3-amino-3-carboxypropyl)-pyridiniu m. Since the compound is a novel type of cross - linking amino acid in elastin, we have designated it "neodesmosine". Neodesmosine was also found in hen egg shell membrane together with desmosine and isodesmosine. When an egg shell membrane suspension and a small amount o formaldehyde were heated in a sealed tube at 110.DEG.C for 24h, the neodesmosine content increased approximately tenfold. When (13C)-formaldehyde was added to the suspension, (13C)-atom was incorporated into the C-2 position of the pyridinium ring of neodesmosine. The biosynthetic route to neodesmosine was proposed. Aortic sample was obtained from a patient with Marfan's syndrome subjected to corrective surgery of annulo aortic ectasia. The contents of three desmosines in the patient were approximately one-tenth of those in the controls. The ratio of neodesmosine to the other desmosines in the patient was higher than that of controls. Furthermore, about 50% of the three crosslinking amino acids were easily extracted from the patient's aorta with 1M aqueous sodium chloride solution, and the extracted fraction contained more neodesmosine than either of the others. Thus, a defect in elastin could explain the vascular fragility clinically observed in Marfan's syndrome patients.(author abst.

7/7/5 (Item 2 from file: 94)
DIALOG(R)File 94:JICST-EPlus

00535688 JICST ACCESSION NUMBER: 88A0064541 FILE SEGMENT: JICST-E
Effects of vitamin B6 on dissecting **aneurysm** of rats fed .BETA.-aminopropionitrile. (Part 2).
KONO KAZUHIKO (1); HAYAKAWA MICHIHIKO (1); KUZUYA FUMIO (1)
(1) Nagoya Univ., School of Medicine
Domyaku Koka(Journal of Japan Atherosclerosis Society), 1987, VOL.15,NO.4, PAGE.1051-1053, FIG.2, REF.5
JOURNAL NUMBER: Y0035AAM ISSN NO: 0386-2682
UNIVERSAL DECIMAL CLASSIFICATION: 577.164.1 591.112.3/.4.05+591.413/.416
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: Physiological effects of pyridoxal 5'-phosphate (PLP) on enzymatic reactions of cross - linking formation in collagen and elastin were studied. In the previous report of authors, it was observed that PLP combined with .BETA.-aminopropionitrile (BAPN) and considerably inhibited the BAPN induced depression of activities of vitamin B6 dependent enzymes in vitro. In this study, we performed an animal experiment using SD rats fed the lathyrogen (BAPN) and the effects of PLP on these animals were examined. Thirty male SD rats were separated the following five groups: Group 1, three rats fed just a standard diet as control. Group 2, six rats receiving 250mg/kg/day of pyridoxine hydrochloride (PIN). Group 3, seven rats receiving 300mg/kg/day of BAPN. Group 4, seven rats receiving the same dose of BAPN as rats of group 3 and 125mg/kg/day of PIN. Group 5, seven rats receiving the same dose of BAPN as rats of group 3 and 250mg/kg/day of PIN. Authors observed the occurrence of death to be due to lethargic dissection of aorta for 189 days. During the observation period, six rats of group 3 and six rats of group 4 died evidently on account of toxic effects of BAPN. But there were three survivors in group 5. It was generally observed that mean value of days required to occur lethargic dissection of aorta in group 5 was longer than those of groups 3 and 4. From these results, it was concluded that the existence of sufficient dose of vitamin B6 may be necessary for mainteining the activity of lysyl oxidase which is the key enzyme for cross - linking formation of collagen and elastin, and lethargic dissections of aorta in rats caused with BAPN were inhibited by the administration of vitamin B6.(author abst.)

7/7/6 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

1018503 ORDER NO: NOT AVAILABLE FROM UNIVERSITY MICROFILMS INT'L.
ELASTIN AND COLLAGEN OF HUMAN ASCENDING AORTA: A BIOCHEMICAL STUDY OF CHANGES ASSOCIATED WITH AGING, THE MARFAN SYNDROME AND ANNULO-AORTIC ECTASIA (AMINO ACID, CROSS - LINK , **ANEURYSM** )
Author: HALME, TAPIO
Degree: PH.D
Year: 1987
Corporate Source/Institution: TURUN YLIOPISTO (FINLAND) (5760)
Source: VOLUME 49/03-C OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 453. 98 PAGES
ISBN: 951-880-005-7
Publisher: UNIVERSITY OF TURKU, SF-20500 TURKU, FINLAND

The biochemical changes of the main structural proteins of the ascending aorta, elastin and collagen, were evaluated in normal aging aorta and in dilated ascending aorta (annulo-aortic ectasia). Part of the annulo-aortic ectasia-patients had the Marfan syndrome. The concentration of the aortic elastin was highest during childhood and decreased with aging. The collagen concentration, on the other hand, increased with age.

The lysine-derived crosslinking amino acids of elastin and collagen were analyzed by labelling the proteins with tritiated borohydride, hydrolyzing them and separating the amino acids by ion exchange chromatography. The lysine aldehyde /aldol condensation product-ratio in elastin as well as the reducible crosslinks /hexosyl lysines-ratio in collagen decreased with age indicating slowing down of the synthesis of

these proteins. In elastin, a new borohydride-reducible compound was found. It seemed to elute in chromatography with valine, between proline and leucine. The activity of this peak increased steadily with aging. Its analysis by gas chromatography/mass spectrometry suggested the compound to be a cyclic derivative of aldol condensation product formed by a non-specific proteolysis during aging of elastin.

In the dilated aortic wall several changes were observed in elastin and/or collagen. The elastin concentration was usually low but varied from normal level to zero. The concentration of collagen changed approximately reverse to that of elastin. No differences were observed in the concentration of elastin and collagen between the dilated aortic walls of the Marfan syndrome patients and of the non-Marfan patients. In the elastin preparations of the dilated aortas the concentration of the new borohydride reducible compound was low suggesting either accelerated elastin synthesis as a response to elastolysis or degradation of old, possibly fatty acid containing elastin molecules. The high ratio reducible crosslinks /hexosyl lysines in collagen of one dilated aorta as well as the low type III/I collagen ratio in several delated aortas suggested a fibrotic process and/or specific degradation of the type III collagen in the pathological aortas.

File 144:Pascal 1973-2002/Nov W3
File 6:NTIS 1964-2002/Nov W3
File 8:Ei Compendex(R) 1970-2002/Nov W2
File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Oct
File 65:Inside Conferences 1993-2002/Nov W2
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Nov W3
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
File 94:JICST-EPlus 1985-2002/Sep W3
File 35:Dissertation Abs Online 1861-2002/Oct

| Set | Items | Description |
|---|---|---|
| S1 | 87880 | **ANEURYSM**? |
| S2 | 178784 | CROSSLINK??? OR CROSS()LINK??? |
| S3 | 177823 | ALDEHYDE? OR ACETALDEHYDE OR PARALDEHYDE OR ACROLEIN OR BENZALDEHYDE OR FORMALDEHYDE OR FORMOCRESOL? |
| S4 | 24295 | FURALDEHYDE OR GLUTARAL OR GLYCERALDEHYDE OR GLYOXAL OR PHENYLGLYOXAL OR PYRUVALDEHYDE OR MALONDIALDEHYDE |
| S5 | 19268 | THIOBARBITURIC()ACID OR O()PHTHALDEHYDE OR RETINALDEHYDE OR CARBODIIMIDE OR CYANAMIDE OR CYANOGENAMIDE |
| S6 | 7 | S1 AND S2 AND S3:S5 |
| **S7** | **6** | **RD (unique items)** |

8/8/1 (Item 1 from file: 9)
DIALOG(R)File 9:(c) 2002 Resp. DB Svcs. All rts. reserv.
02346656 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Wound Care Products - Wound Sealing
1998
WORD COUNT: 4102
COMPANY NAMES: CLOSURE MEDICAL CORP
INDUSTRY NAMES: Medical devices & diagnostics
PRODUCT NAMES: Surgical dressings (384218)
CONCEPT TERMS: All company; All market information; Corporate strategy; Trends
GEOGRAPHIC NAMES: North America (NOAX); United States (USA)

8/8/5 (Item 4 from file: 442)

DIALOG(R)File 442:(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv.
00027588
Copyright (C) 1983 American Medical Association
Osteogenesis Imperfecta and Paget's Disease of Bone; Biochemical and Morphologic Studies (ORIGINAL INVESTIGATIONS)
1983;
LINE COUNT: 00362 WORD COUNT: 05007

8/8/6 (Item 1 from file: 149)
DIALOG(R)File 149:(c) 2002 The Gale Group. All rts. reserv.
02064184 SUPPLIER NUMBER: 84072814 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Osteosarcoma: A Multidisciplinary Approach to Diagnosis and Treatment.
2002
WORD COUNT: 4021 LINE COUNT: 00414
DESCRIPTORS: Osteosarcoma--Care and treatment

8/3,K/2 (Item 1 from file: 442)
DIALOG(R)File 442:AMA Journals
(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv.
00043334
Copyright (C) 1988 American Medical Association
Histochemistry of Aortic Elastin in Patients With Nonspecific Abdominal Aortic **Aneurysm**al Disease
TILSON, M. DAVID
Archives of Surgery
April, 1988; 123: 503-5051988;
LINE COUNT: 00115 WORD COUNT: 01599
ABSTRACT: Histochemical studies of nine **aneurysm**al aortas revealed a conspicuous deficiency of iron hematoxylin-reactive elastin in four specimens, in comparison...
... to test the relative importance of maturation arrest vs enzymatic destruction in the pathogenesis of **aneurysm**al disease will require further studies.
Nonspecific refers to those forms of **aneurysm**al disease in which the phenotypes of known connective-tissue disorders, like Marfan's syndrome or Ehlers-Danlos syndrome, are not recognizable. Abdominal aortic **aneurysm**s (AAAs) are the most common form of this disease. The primacy of atherosclerosis in the pathogenesis of these **aneurysm**s has been questioned in recent years, (Ref. 1,2) and other studies have raised the...
...that there is an important genetic element.(Ref. 3-8)
The deformation that occurs in **aneurysm**al disease suggests mechanical failure of one or more of the major structural proteins of the...
... et al(Ref. 10) were the first to document deficiencies of elastin and collagen in **aneurysm**al tissue (as percentages of solids present in the aortic wall), and the observation of elastin...
...for study in addition to eight adult human control aortas. The aortas of normal and **aneurysm** -prone Blotchy mice were also evaluated.
MATERIALS AND METHODS
Human specimens were obtained from the...
... the criterion of a final diagnosis of either AAA or atherosclerosis of the aorta (non- **aneurysm**al ); consecutive specimens fitting the diagnostic criteria were entered into the study. Nine **aneurysm**al and eight control specimens were evaluated. The human fetal (six weeks) and newborn aortas were...
... of age. Normal mouse aortas were obtained from littermate brothers of the mutant male mice.

**Formaldehyde solution was routinely used for fixation after preliminary studies with fresh tissues suggested** that the...
... of the four conspicuously abnormal AAA specimens. Paradoxically, as illustrated in Fig 1, top, these **aneurysm**al aortic walls showed a background matrix that resembled the lamellar organization of elastin when viewed under fluorescent light with rhodamine filters.

Figure 2 illustrates similar phenomena in the **aneurysm** prone Blotchy mouse. The aorta is thicker than in the normal mouse, with widening of the...
...than with the iron hematoxylin.

Figure 3 illustrates an adult human control aorta and an **aneurysm**al aorta. Figure 3, bottom, shows the UV photomicrographs under neutral filters and adds one more...
... codistributes with a fibrillar matrix that morphologically resembles elastin.

COMMENT

While four of the nine **aneurysm**al aortas showed conspicuous deficiency of EVG-reactive elastin, well-defined elastic lamellae were stained by...fetal aorta. This observation does not necessarily imply that the elastin of certain patients with **aneurysm**s undergoes some kind of maturation arrest, because there is the alternative explanation that the elastin...
... whether similar changes are evident at sites in the aorta that are remote from the **aneurysm** .

In our laboratory, our work has been primarily directed toward pursuing the possibility of an abnormality of collagen cross - linkage in AAA.(Ref. 18) An extension of that effort has led to data that suggest that there may be several molecular forms of collagen abnormality in patients with **aneurysm**al disease. This study suggests that an abnormality of elastin may also be a contributory factor...
...and osteogenesis imperfecta, that have been described, a similar pattern of molecular heterogeneity in nonspecific **aneurysm**al disease would not be surprising.

This study was supported by grant RO-1 HL 29325...

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8/3,K/3 (Item 2 from file: 442)
DIALOG(R)File 442:AMA Journals

00039990

Arterial Regeneration Over Polydioxanone Prostheses in the Rabbit ( ORIGINAL ARTICLE)
GREISLER, HOWARD P.; ELLINGER, JOAN; SCHWARCZ, THOMAS H.; GOLAN, JOHN; RAYMOND, RICHARD M.; KIM, DAE UN
Archives of Surgery
June, 1987; 122: 715-7211987;
LINE COUNT: 00305 WORD COUNT: 04218
... Smooth regenerated conduits without stenoses were seen in 27 of 28 specimens, with one small **aneurysm**. Transprosthetic myofibroblast migration and proliferation paralleled the kinetics of macrophage-mediated prosthetic dissolution, which was...
...living anesthetized animals.
Light Microscopy
Following fixation of all 28 specimens in 40% buffered neutral formaldehyde solution, 5-mu m longitudinal and cross sections of tissue embedded in paraffin were stained...
...an interstitial hemorrhagic pneumonia.
Among the 28 explants, no evidence of perigraft hematoma, hemorrhage, false **aneurysm** , thrombosis, or graft infection was observed. The PDS material progressively dissolved and was no longer...conduits with the following gross characteristics: parallel walls (original diameter), 96.4% (27/28); true **aneurysmal** dilatation, 3.6% at three months (1/28); and stenosis or occlusion, 0%.
All specimens...
... more dense than previously, likely a reflection of increased collagen deposition and alterations of collagen cross - linking . Minimal lipid or calcium infiltration was seen through 12 months.

Scanning electron microscopy (Fig 4...absorbed prosthesis might more reliably allow for the adequate strength necessary to prevent bursting or **aneurysm**al dilatation in species with slower tissue regenerative properties was not fully resolved by our study. Certainly, the rate of **aneurysm**al dilatation (3.6%) compares favorably with that published previously (Ref. 1) in PGA specimens (15...
... J.E., and R.M.R., unpublished data, January 1984). It may be theorized that **aneurysm**al dilatation begins when the sum of the strengths of the tissue and the prosthetic components to resist dilatation secondary to lateral wall pressure are at a combined minimum. **Aneurysm**al dilatation would then be likely secondary either to an inadequate early combined tensile strength -- probably...

8/3,K/4 (Item 3 from file: 442)
DIALOG(R)File 442:AMA Journals

00038447

Elastolytic and Collagenolytic Studies of Arteries; Implications for the Mechanical Properties of **Aneurysm**s (PAPERS READ BEFORE THE SEVENTH ANNUAL SURGICAL SYMPOSIUM OF THE ASSOCIATION OF VETERANS ADMINISTRATION SURGEONS, AIRLIE, VA, MAY 25-28, 1983)
DOBRIN, PHILIP B.; BAKER, WILLIAM H.; GLEY, WILLIAM C.
Archives of Surgery
April, 1984; 119: 405-4091984;
LINE COUNT: 00310 WORD COUNT: 04281
Elastolytic and Collagenolytic Studies of Arteries; Implications for the Mechanical Properties of **Aneurysm**s
... and compliance changes after treatment with collagenase. This finding corresponds to the greater tendency of **aneurysm**s to develop in internal and common iliac arteries. (Arch Surg 1984; 119: 405-409)
The formation and rupture of **aneurysm**s is one of the most dramatic pathologic events that occurs to arteries. These lesions occur...
... contributions of the fibrous connective tissues elastin and collagen to the formation and rupture of **aneurysm**s . This evaluation was undertaken by using large doses of purified elastase and purified collagenase to...
... these studies, **each vessel segment was fixed in buffered 10% aqueous solutio of standard 40% formaldehyde solution, embedded in paraffin, and sectioned for histologic examination**. Sections were stained with Verhoeff's
...Iliac Arteries
Internal and common iliac arteries are generally more susceptible to the development of **aneurysm**s than are external iliac arteries. (Ref. 1,2) Accordingly, experiments were performed on nine human...
...with collagenase, the vessels took up markedly less Masson stain.
COMMENT
The mechanical behavior of **aneurysm**s often is described by invoking the law of Laplace: T = P X r, (Ref. 7...
... becomes thin with dilatation and the ratio of radius to wall thickness increases. (Ref. 4) **Aneurysm**s frequently are lined with a laminated clot, but one cannot presume that the presence of...
... exert retractive tension. Indeed, in most cases, the clot is easily scooped out after arteriotomy.
**Aneurysm**s often dilate gradually, sometimes taking several years to achieve large dimensions. The gradual aspect of...
... this gradual phenomenon, geometric and structural. The geometric explanation is concerned with the shape of **aneurysm**s . The previously

stated equation may be used to compute the circumferential tension in a cylinder. However, **aneurysms** frequently acquire a fusiform shape, a configuration better approximated by a sphere (Fig 4).Since...
... of that for a cylinder, the wall tension required to maintain equilibrium in a fusiform **aneurysm** is only about half of that in a cylindrical vessel with the same dimensions. This...
... Thinning of the wall also increases circumferential wall stress. (Ref.4)

The structural explanation of **aneurysm**al stability is concerned with the contributions of collagen. The left panels of Figs 1 to...
... Indeed, Summer et al (Ref. 8) showed that the elastin and collagen persisting in human **aneurysms** is located mainly in the tunica adventitia. If the elastin in the wall is neglected...
... This conclusion is supported by histologic studies. (Ref. 11) Slack collagen could be recruited in **aneurysm**al vessels, especially if a vessel is sufficently dilated to stretch the adventitia. In our experiments...
...time of excision.In vivo, new collagen may also be deposited as the wall becomes **aneurysm**al , for stretch is known to be a stimulus for connective tissue synthesis by vascular smooth...
... be one explanation for the elevated elastase and collagenase activities reported in the walls of **aneurysms** . (Ref. 13,14)

The pathogenesis of **aneurysms** is unclear. Several authors have noted the relative paucity of vasa vasorum in the human...
... 7,15,16) suggesting that insufficient wall nutrition may predispose patients to the formation of **aneurysms** in this vessel. Moreover, accumulation of atherosclerotic material may occlude the ostia of the vessels...
... necrosis, (Ref. 15,17) it does not, in the short run, cause the development of **aneurysms** . Although most **aneurysms** are attributed to atherosclerotic degeneration of the wall, the data of Tilson and Stansel (Ref. 18) suggest that the association of **aneurysms** with atherosclerosis may be incidental. Their comparison of patients with occlusive and **aneurysm**al disease showed marked differences in age, sex ratio, and postoperative prognosis.Tilson and Dang (Ref. 19) noted that patient with **aneurysm**al disease often exhibit generalized arteriomegaly, suggesting that such patient may exhibit a global tendency for **aneurysm** development. Such a tendency might reflect a defect in connective tissue metabolism. In this regard, Tilson (Ref. 20) documented decreased tissue copper levels in both experimental animals and patients with **aneurysms** . Copper is known to be a cofactor in the synthesis of normal elastin and collagen, and Summer and coworkers (Ref. 8) reported that human aortic **aneurysms** possess decreased quantities of elastin and collagen. Recently, Swanson et al (Ref. 21) suggested that...
... such as laparotomy that are unrelated to arterial surgery, may precipitate rupture of previously stable **aneurysms** .

CITED REFERENCES:

...My colleagues and I have had some experience with elastase and the experimental production of **aneurysms** . At one time, elastase was reported to be a means of producing experimental **aneurysms** , and it worked well in this regard. I can confirm that elastase-produced **aneurysms** do not rupture for up to one year. All of our dogs with abdominal **aneurysms** produced by elastase were followed up for one year, and there was no incidence of...

...has a good collagen mechanism or method for synthesizing collagen to maintain integrity of the **aneurysm** . Presumably, there is a dynamic interplay between elastic tissue and collagen that occurs in all...

...at all times. We believe that elastic destruction is the first incident

leading to an **aneurysm** . We are all aware of the apparent increase in rupture of abdominal **aneurysms** in the clinical setting following abdominal exploration for another condition. This event has some interesting...

...Recently, there has been considerable interest in the use of lathyrogens (drugs that inhibit the crosslinking of collagen) in the treatment of arthritis, keloids, urethral strictures, and other problems of excessive scarring. Do you think that use of these drugs will lead to **aneurysms** , as it did in turkeys that ate sweet peas, the event that led to the...

...a little more concerned with the aorta rather than the iliac artery? Certainly, in humans, **aneurysm** of the aorta is much more of a problem than that of the iliac artery...

...documenting that there has, in fact, been an increase in the incidence of abdominal aortic **aneurysms** in a community study in their area. This is the only data I know of...

...I would like to ask relates to the metabolism of elastin and collagen in the **aneurysm** wall. Two researchers have constructed a poststenotic dilation model in which the physical properties of...

...and colleagues at the University of California, San Francisco, described ten patients with known asymptomatic **aneurysms** that ruptured within an average of ten days after laparotomy. So, this phenomenon has been...

...of overnight storage under refrigeration.

Dr Myers, I do not think that an epidemic of **aneurysms** is to be expected, but I suppose we will just have to wait and see...

...lathyogens will be. In our work, we are just trying to understand the mechanism of **aneurysmal** lesions. Indeed, I would like to emphasize that the focus of this work was not...

...did not study the aorta. Certainly, the aorta is the vessel more frequently involved with **aneurysm** . It is larger than any other artery. We studied external and internal iliac arteries because location and size, one predisposed to the development of **aneurysm** , and the other not. The external and internal iliac arteries seemed to meet these criteria...

...the University of California, Los Angeles, have measured these enzymes in patients with and without **aneurysms** . They found that both enzymes were elevated in the walls of **aneurysms** , but, as pointed out by the investigators, one really does not know whether the increase in enzymatic activity causes or results from the enlarged **aneurysmal** wall. Increased enzymatic activity may reflect increased turnover rates of the wall connective tissue in the highly stressed **aneurysmal** wall.

File 95:TEME-Technology & Management 1989-2002/Nov W1
File 98:General Sci Abs/Full-Text 1984-2002/Oct
File 9:Business & Industry(R) Jul/1994-2002/Nov 15
File 16:Gale Group PROMT(R) 1990-2002/Nov 18
File 160:Gale Group PROMT(R) 1972-1989
File 148:Gale Group Trade & Industry DB 1976-2002/Nov 18
File 621:Gale Group New Prod.Annou.(R) 1985-2002/Nov 14
File 636:Gale Group Newsletter DB(TM) 1987-2002/Nov 18
File 441:ESPICOM Pharm&Med DEVICE NEWS 2002/Nov W2
File 20:Dialog Global Reporter 1997-2002/Nov 18
File 813:PR Newswire 1987-1999/Apr 30
File 15:ABI/Inform(R) 1971-2002/Nov 18
File 88:Gale Group Business A.R.T.S. 1976-2002/Nov 14

File 442:AMA Journals 1982-2002/Dec B2
File 444:New England Journal of Med. 1985-2002/Nov W3
File 149:TGG Health&Wellness DB(SM) 1976-2002/Nov W2

| Set | Items | Description |
|---|---|---|
| S1 | 14357 | **ANEURYSM**? |
| S2 | 38065 | CROSSLINK??? OR CROSS()LINK??? |
| S3 | 38703 | ALDEHYDE? OR ACETALDEHYDE OR PARALDEHYDE OR ACROLEIN OR BENZALDEHYDE OR FORMALDEHYDE OR FORMOCRESOL? |
| S4 | 2540 | FURALDEHYDE OR GLUTARAL OR GLYCERALDEHYDE OR GLYOXAL OR PHENYLGLYOXAL OR PYRUVALDEHYDE OR MALONDIALDEHYDE |
| S5 | 1561 | THIOBARBITURIC()ACID OR O()PHTHALDEHYDE OR RETINALDEHYDE OR CARBODIIMIDE OR CYANAMIDE OR CYANOGENAMIDE |
| S6 | 0 | S1(S)S2(S)S3:S5 |
| S7 | 6 | S1 AND S2 AND S3:S5 |
| **S8** | **6** | **RD (unique items)** |

File 42:Pharmaceuticl News Idx 1974-2002/Nov W2
File 285:BioBusiness(R) 1985-1998/Aug W1
File 71:ELSEVIER BIOBASE 1994-2002/Nov W3
File 74:Int.Pharm.Abs. 1970-2002/Nov
File 174:Pharm-line(R) 1978-2002/Nov W2

| Set | Items | Description |
|---|---|---|
| S1 | 3518 | ANEURYSM? |
| S2 | 15959 | CROSSLINK??? OR CROSS()LINK??? |
| S3 | 12513 | ALDEHYDE? OR ACETALDEHYDE OR PARALDEHYDE OR ACROLEIN OR BENZALDEHYDE OR FORMALDEHYDE OR FORMOCRESOL? |
| S4 | 4981 | FURALDEHYDE OR GLUTARAL OR GLYCERALDEHYDE OR GLYOXAL OR PHENYLGLYOXAL OR PYRUVALDEHYDE OR MALONDIALDEHYDE |
| S5 | 3571 | THIOBARBITURIC()ACID OR O()PHTHALDEHYDE OR RETINALDEHYDE OR CARBODIIMIDE OR CYANAMIDE OR CYANOGENAMIDE |
| S6 | 0 | S1 AND S2 AND S3:S5 |

File 129:PHIND(Archival) 1980-2002/Nov W2
File 429:Adis Newsletters(Archive) 1982-2002/Nov 18
File 445:IMS R&D Focus 1991-2002/Nov W2
File 453:Drugs of the Future 1990-2002/Aug

| Set | Items | Description |
|---|---|---|
| S1 | 477 | ANEURYSM? |
| S2 | 423 | CROSSLINK??? OR CROSS()LINK??? |
| S3 | 446 | ALDEHYDE? OR ACETALDEHYDE OR PARALDEHYDE OR ACROLEIN OR BENZALDEHYDE OR FORMALDEHYDE OR FORMOCRESOL? |
| S4 | 71 | FURALDEHYDE OR GLUTARAL OR GLYCERALDEHYDE OR GLYOXAL OR PHENYLGLYOXAL OR PYRUVALDEHYDE OR MALONDIALDEHYDE |
| S5 | 73 | THIOBARBITURIC()ACID OR O()PHTHALDEHYDE OR RETINALDEHYDE OR CARBODIIMIDE OR CYANAMIDE OR CYANOGENAMIDE |
| S6 | 0 | S1 AND S2 AND S3:S5 |

6/26,TI/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013492907
WPI Acc No: 2000-664850/200064
Hydrophilic polymer coating for medical devices, e.g. catheter, for use

in reducing or inhibiting matrix metalloproteinases in the body, comprises a matrix metalloproteinase inhibiting polymer composition

6/26,TI/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
011306349
WPI Acc No: 1997-284254/199726
Production of medical materials - comprises crosslinking gelatin with succinimidated poly-L-glutamic acid, haemostatic agent and sealing agent

6/7,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014560932 **Image available**
WPI Acc No: 2002-381635/200241
New S-(2(((1-iminoethyl)amino)ethyl)-2-methyl-L-Cystein and its salt useful in the treatment of nitric oxide synthase mediated disorders e.g. pain, headaches, inflammation, fever, arthritis, diabetes, Alzheimer disease, Stroke
Patent Assignee: AWASTHI A K (AWAS-I); BERGMANIS A A (BERG-I); DURLEY R C (DURL-I); GANSER S S (GANS-I); HAGEN T J (HAGE-I); HALLINAN E A (HALL-I); HANSEN D W (HANS-I); HICKORY B S (HICK-I); MOORMANN A E (MOOR-I); PITZELE B S (PITZ-I); PROMO M A (PROM-I); SCHARTMAN R R (SCHA-I); SNYDER J S (SNYD-I); TRIVEDI M (TRIV-I); TSYMBALOV S (TSYM-I); WEBBER R K (WEBB-I); PHARMACIA CORP (PHAA )
Inventor: AWASTHI A K; BERGMANIS A A; DURLEY R C; GANSER S S; HAGEN T J; HALLINAN E A; HANSEN D W; HICKORY B S; MOORMANN A E; PITZELE B S; PROMO M A; SCHARTMAN R R; SNYDER J S; TRIVEDI M; TSYMBALOV S; WEBBER R K
Number of Countries: 001 Number of Patents: 002
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| US 20020019563 | A1 | 20020214 | US 2000191923 | P | 20000324 | 200241 | B |
| | | | US 2001816577 | A | 20010323 | | |
| US 6403830 | B2 | 20020611 | US 2000191923 | P | 20000324 | 200244 | |
| | | | US 2001816577 | A | 20010323 | | |

Priority Applications (No Type Date): US 2000191923 P 20000324; US 2001816577 A 20010323
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| US 20020019563 | A1 | | 46 | C07C-323/25 | Provisional application US 2000191923 |
| US 6403830 | B2 | | | C07C-323/58 | Provisional application US 2000191923 |

Abstract (Basic): US 20020019563 A1

NOVELTY - S-(2(((1-iminoethyl)amino)ethyl)-2-methyl-L-Cystein or its salt is new.

ACTIVITY - Antiinflammatory; Analgesic; Antipyretic; Antiarthritic; Osteopathic; Antirheumatic; Antiasthmatic; Gynecological; Tocolytic; Antipsoriatic; Dermatological; Vulnerary; Hepatotropic; Virucide; Ophthalmological; Antiulcer; Cystostatic; Antimigraine; Vasotropic; Antithyroid; Antianemic; Antidiabetic; Neuroprotective; Nootropic; Cerebroprotective; Tranquilizer; Antiallergic; Antibacterial; Immunosuppressive; Antiarteriosclerotic; Cardiant; Antidiarrheic; Antiparkinsonian; Anticonvulsant; Anti-HIV; Immunomodulator; Neuroleptic; Antidepressant; Antismoking; Antialcoholic; and Antitumor.

MECHANISM OF ACTION - Nitric oxide synthesis inhibitors or modulators.

Nitric oxide synthase (NOS) activity was measured by monitoring the conversion of L-(2,3-3H)-arginine to L-(2,3-3H)-citrulline as described in Bredt and Snyder, Proc.Natl.Acad.Sci.U.S.A., 87, 682-685, 1990 and Moore et al, J.Med.Chem.39, 669 - 672, 1996. Human inducible NOS (hiNOS) and human endothelial costitutive NOS (hecNOS) and human neuronal constitutive NOS (hncNOS) were each cloned from RNA extracted from human tissue.

To measure NOS activity, enzyme (10 mul) was added to 50 mM Tris (40 mul) (pH 7.6) in the presence or absence of S-(2-((1-iminoethyl)amino)ethyl)-2-methyl-L-cysteine, dihydrochloride (A) and the reaction was initiated by the addition of a reaction mixture (50 mul) containing 50 mM Tris (pH 7.6), bovine serum albumin (2 mg/ml), thero-1,4-dimercapto-2,3-butanediol (DTT) (2 mM), calcium chloride (CaCl2) (4 mM), FAD (20 muM), tetrahydrobiopterin (100 muM), nicotinamide adenine dinucleotide phosphatase (NADPH) (0.4 mM) and L-arginine (60 muM) containing L-(2,3(3H)-arginine (0.9 muCi). The final concentration of L-arginine in the assay was 30 muM. For hecNOS or hncNOS, calmodulin was included at a final concentration of 40 - 100 nM. Following incubation at 37degreesC for 15 minutes, the reaction was terminated by the addition of a suspension (400 mul) (1 part resin, 3 parts buffer) of Dowex SOW X-8 (RTM; cation exchange resin) in a stop buffer containing 10 mM (ethylenebis(oxyethylenenitrilo)) tetraacetic acid (EGTA), 4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid (HEPES) (100 mM), pH 5.5 and L-citrulline (1 mM). After mixing the resin was allowed to settle and L-(2,3-3H)-citrulline formation was determined. The IC50 value of (A) for hiNOS, hecNOS and hncNOS was 3.1, 77 and 15 respectively.

USE - For treating inflammation, other nitric oxide synthase mediated disorders e.g. pain, headaches or fever; different types of arthritis (e.g. rheumatoid arthritis, spondyloarthropathies, gouty arthritis, osteoarthritis, systemic lupus erythematosus, juvenile arthritis, acute rheumatic arthritis, enteropathic arthritis, neuropathic arthritis, psoriatic arthritis or pyogenic arthritis); asthma, bronchitis, menstrual cramps (e.g. dysmenorrhea), premature labor, tendinitis, bursitis, skin related conditions e.g. psoriasis, eczema, burns, sunburn, dermatitis, pancreatitis, hepatitis and from post operative inflammation including from ophthalmic surgery e.g. cataract surgery and refractive surgery.

Gastrointestinal conditions e.g. inflammatory bowel disease, Crohn's disease, gastritis, irritable bowel syndrome and ulcerative colitis; different types of cancer (e.g. colorectal, breast, lung, prostate, bladder, cervix, and skin cancers); inflammation and tissue damage in vascular diseases, migraine headaches, periarteritis nodosa, thyroiditis, aplastic anemia, Hodgkin's disease, sclerodoma, rheumatic fever, type I and II diabetes, neuromuscular junction disease including myasthenia gravis, white matter disease including multiple sclerosis, sarcoidosis, nephrotic syndrome, Behcet's syndrome, polymyositis, gingivitis, nephritis, hypersensitivity, swelling occurring after injury, myocardial ischemia etc.; ophthalmic diseases e.g. glaucoma, retinitis, retinopathies, uveitis, ocular photophobia and of inflammation and pain associated with acute injury to the eye tissue; pulmonary inflammation associated with viral infections and cystic fibrosisCentral nervous system disorders e.g. cortical dementias including Alzheimer's disease and central nervous system damage resulting from stroke, ischemia and trauma; allergic rhinitis, respiratory distress syndrome, endotoxin shock syndrome,

atherosclerosis, pain including postoperative pain, dental pain, muscular pain and pain resulting from cancer; cardiovascular ischemia, congestive heart failure, myocarditis, migraine, aortic **aneurysm** , reflux esophagitis, diarrhea, emphysema, bronchiectasis, hyperalgesia (allodynia), cerebral ischemia (both focal ischemia, thrombotic stroke and global ischemia (e.g. secondary to cardiac arrest)); central nervous system disorders mediated to NO e.g. Parkinson's disease; nerve degeneration or nerve necrosis in hypoxia, hypoglycemia and epilepsy; central nervous system trauma e.g. spinal cord and head injury; hyperbaric oxygen convulsions and toxicity, dementia e.g. pre-senile dementia and AIDS-related dementia; cachexia, Sydenhar's chorea, Huntington's disease, Amyotrophic Lateral Sclerosis, korsakoff's disease, imbecility relating to a cerebral vessel disorder, sleeping disorders, schizophrenia, depression or other symptoms associated with premenstrual syndrome (PMS), anxiety and septic shock; pain including somatogenic (either nociceptive or neuropathic), both acute and chronic.

Preservation of opiate tolerance in patients needing protected opiate analgesics and benzodiazepine tolerance in patients taking benzodiazepine and other addictive behavior e.g. nicotine addition, alcoholism and eating disorders; drug withdrawal symptoms, symptoms of withdrawal from opiate, alcohol or tobacco addiction; preventing tissue damage; neoplasias, adenomatous polyps including familial adenomatous polyposis (FAP); angiogenesis related disorders or conditions e.g. tumor growth, metastasis and macular degeneration; and in inhibiting nitric oxide production from L-arginine including systemic hypotension associated with septic and/or toxic hemorrhagic shock induced by a wide variety of agents; therapy with cytokines e.g. tumor necrosis factor (TNF), interleukin (IL)-1 and (IL)-2; and as an adjuvant to short term immunosuppression in transplant therapy.

(I) is useful in the treatment of humans and in veterinary treatment of companion animals, exotic animals and farm animals e.g. rodents, horses, dogs and cats.

ADVANTAGE - The compound is very efficacious as an inducible nitric oxide synthase inhibitor and does not penetrate into certain non-target organs in test systems. The compound has significantly less harmful side effects. The compound is useful as an adjunct to radiation therapy to reduce side effects or enhance efficacy.

pp; 46 DwgNo 0/0

Derwent Class: A96; B05
International Patent Class (Main): C07C-323/25; C07C-323/58
International Patent Class (Additional): A61K-031/155; A61P-029/00
Abstract (Basic):

... muscular pain and pain resulting from cancer; cardiovascular ischemia, congestive heart failure, myocarditis, migraine, aortic **aneurysm** , reflux esophagitis, diarrhea, emphysema, bronchiectasis, hyperalgesia (allodynia), cerebral ischemia (both focal ischemia, thrombotic stroke and...

Technology Focus:

... counterion is a resin bound anion selected from polyacrylate or sulfonated poly(styrene divinylbenzene) resin crosslinked with divinylbenzene. The cationic counterion is a resin bound cation selected from a cationically functionalized...

Extension Abstract:

... R)-cysteine methyl ester hydrochloride (8.58 g), pivalaldehyde (8.61 g), and triethylamine (5.57 g) were refluxed in pentane (800 ml)

with...

6/7,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014189812
WPI Acc No: 2002-010509/200201
Biocompatible material useful in sealing vascular punctures, preventing post-operative adhesions, repairing tissue voids, embolizing arterio-venous malformation, or filling an **aneurysm** , comprises a mixture of protein and a polymer solution
Patent Assignee: NEO MEND INC (NEOM-N)
Inventor: CRUISE G M; HNOJEWYJ O; MILO C
Number of Countries: 093 Number of Patents: 002
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| WO 200166017 | A1 | 20010913 | WO 2001US5694 | A | 20010222 | 200201 | B |
| AU 200138635 | A | 20010917 | AU 200138635 | A | 20010222 | 200204 | |

Priority Applications (No Type Date): US 2000520856 A 20000307
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| WO 200166017 | A1 | E | 63 | A61B-017/00 | |

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

| | | | | |
|---|---|---|---|---|
| AU 200138635 | A | | A61B-017/00 | Based on patent WO 200166017 |

Abstract (Basic): WO 200166017 A1

NOVELTY - A biocompatible material comprises a mixture of a protein solution (A) and a polymer solution (B). (B) includes a derivative of a hydrophilic polymer with a functionality of at least 3. On mixing, (A) and (B) cross - link to form a non-liquid, three-dimensional network.

DETAILED DESCRIPTION - A biocompatible material comprises a mixture of a protein solution (A) and a polymer solution (B). (B) includes a derivative of a hydrophilic polymer with a functionality of at least 3. On mixing, (A) and (B) cross - link to form a non-liquid, three-dimensional network. The network degrades to a liquid form. The polymer includes a degradation control region to achieve a desired degradation period and/or a cross - linking group to achieve a desired cross - linking period.

An INDEPENDENT CLAIM is also included for a system (S1) comprising (A), (B) and instructions for forming a mixture of (A) and (B), and applying the mixture to seal a vascular puncture site, seal tissue from liquid leaks (preferably blood), seal solid or gas leaks, prevent post-operative adhesions, to repair a tissue void, augment tissue, to embolize an arterio-venous malformation, or to fill an **aneurysm** .

ACTIVITY - Vulnerary.

No supporting data given.

MECHANISM OF ACTION - None given in the source material.

USE - For use in systems to seal a vascular puncture site (degradation period (DP) of approximately 30 days, and cross - linking period (CP) of 15 - 60 seconds); seal tissue from liquid leaks (preferably blood) or solid leaks (DP of approximately 30 days and CP of less than 1 second); to repair a tissue void (DP of 30 - 60 days,

and CP of 5 seconds); to prevent post-operative adhesions (DP of 5 - 30 days, and CP of less than 1 second); to augment tissues (DP of approximately 1 year, and CP of approximately 120 seconds); to embolize an arterio-venous malformation (CP of 30 - 120 seconds); to fill an **aneurysm** or deliver a pharmaceutical (DP of approximately 1 year, and CP of 5 - 30 seconds); and to deliver cells (DP of approximately 1 week - 6 months, and CP of 5 - 30 seconds) (all claimed).

ADVANTAGE - The materials are cost effective. The material flows into the surface irregularities before solidification and enhances patient safety. Unlike the prior art, no emboli is formed if the biomaterial enters the bloodstream before solidification. The hydrogel formed from the material possesses a high adhesive and cohesive strength.

pp; 63 DwgNo 0/6

Derwent Class: A96; B04; B07; D16; D22; P31
International Patent Class (Main): A61B-017/00
... punctures, preventing post-operative adhesions, repairing tissue voids, embolizing arterio-venous malformation, or filling an **aneurysm** , comprises a mixture of protein and a polymer solution
Technology Focus:
... CG= cross - linking group...
...The degradation period (DP) is from 1 - more than 500 (preferably 5 - 30) days. The cross - linking period (CP) is from less than 1 second - greater than 10 hours (preferably less than...
...Preferred Components: The cross - linking group reacts with at least one thiol, amine or aldehyde . The cross - linking group is selected from active ester, epoxide, oxycarbonylimidazole, nitrophenyl carbonate, tresylate, mesylate, tosylate, isocyanate, vinyl...
...phosphate). The material additionally comprises a color changing agent. The agent changes its color when cross - linking of the mixture takes place. The agent undergoes color change in response to the change...

6/7,K/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014178613 **Image available**
WPI Acc No: 2001-662841/200176
Embolic composition used as liquid embolic agents, comprises macromers having polymeric backbone, and at least two pendant chains bearing crosslinkable groups
Patent Assignee: BIOCURE INC (BIOC-N); ASFAW B T (ASFA-I); CHAOUK H (CHAO-I); GOODRICH S D (GOOD-I); GOUPIL D W (GOUP-I); HOLLAND T (HOLL-I); LATINI L (LATI-I)
Inventor: ASFAW B T; CHAOUK H; GOODRICH S D; GOUPIL D W; HOLLAND T; LATINI L
Number of Countries: 094 Number of Patents: 004
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| WO 200168720 | A1 | 20010920 | WO 2001US7940 | A | 20010313 | 200176 | B |
| US 20010036451 | A1 | 20011101 | US 2000188975 | A | 20000313 | 200176 | |
| | | | US 2000254697 | A | 20001211 | | |
| | | | US 2001804963 | A | 20010313 | | |
| US 20010051670 | A1 | 20011213 | US 2000188975 | A | 20000313 | 200204 | |
| | | | US 2001804925 | A | 20010313 | | |
| AU 200145660 | A | 20010924 | AU 200145660 | A | 20010313 | 200208 | |

Priority Applications (No Type Date): US 2000254697 P 20001211; US

2000188975 P 20000313; US 2001804963 A 20010313; US 2001804925 A 20010313
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200168720 A1 E 40 C08F-008/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
US 20010036451 A1 A61K-031/765 Provisional application US 2000188975
Provisional application US 2000254697
US 20010051670 A1 A61F-002/00 Provisional application US 2000188975
AU 200145660 A C08F-008/00 Based on patent WO 200168720
Abstract (Basic): WO 200168720 A1

NOVELTY - An embolic composition comprises macromers having polymeric backbone comprising units with 1,2-diol or 1,3-diol structure and at least two pendant chains bearing crosslinkable groups. The macromers can be crosslinked to form hydrogel.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of embolization comprising providing the above-mentioned embolic composition, delivering the composition to the embolization site, and crosslinking the macromers to form hydrogel.

ACTIVITY - Cytostatic; Coagulant.

MECHANISM OF ACTION - None given.

USE - The embolic composition is used as liquid embolic agents for blocking and filling lumens and spaces. It is also for vascular occlusion for treatment of tumors or fibroids, occlusion of vascular malformations, such as arteriovenous malformations (AVM), fillers for **aneurysm** sacs, or endoleak sealants (claimed), occlusion of left appendages, arterial sealants, puncture sealants, or occlusion of other lumens like fallopian tube.

ADVANTAGE - The composition is highly versatile, and can be produced simply and efficiently because the starting material is inexpensive to obtain and prepare, and the macromers are stable. Thus, highly pure macromers can be used during crosslinking , without requiring aldehyde .

pp; 40 DwgNo 0/0

Derwent Class: A14; A25; A96; B07; D22; P34
International Patent Class (Main): A61F-002/00; A61K-031/765; C08F-008/00
International Patent Class (Additional): A61L-024/04; A61L-027/16; A61L-027/34; A61L-027/52; A61L-029/04; A61L-029/08; A61L-031/04; A61L-031/10; C08F-008/30; C08F-008/48; C08F-290/12; C08K-003/00

6/7,K/4 (Item 4 from file: 350) a duplicate. See inventor search section
DIALOG(R)File 350:Derwent WPIX
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014154372 **Image available**
WPI Acc No: 2001-638591/200173
Stent and graft device for treating **aneurysm**al wall of bodily vessel, contains crosslinking solution pumped out through lumen and port toward proximal end of catheter
Patent Assignee: LESCHINSKY B (LESC-I)
Inventor: LESCHINSKY B
Number of Countries: 001 Number of Patents: 001
Patent Family:

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Patent No      Kind   Date     Applicat No     Kind   Date      Week
US 20010029349 A1     20011011 US 96631337     A    19960412  200173  B
                               US 98165333     A    19981001
                               US 2001880241   A    20010613
Priority Applications (No Type Date): US 2001880241 A 20010613; US 96631337
  A 19960412; US 98165333 A 19981001
Patent Details:
Patent No  Kind Lan Pg   Main IPC     Filing Notes
US 20010029349 A1    13 A61M-029/00   Cont of application US 96631337
                                      CIP of application US 98165333
Abstract (Basic): US 20010029349 A1
        NOVELTY - Stent and graft device has a catheter (31B) with a
    longitudinal axis and lumen(s). A distal end of the catheter is
    connected to a crosslinking solution. An infusion and vacuum port
    pumps out crosslinking solution through the lumen and port toward the
    proximal end of the catheter for crosslinking at least a portion of
    the vessel.
        USE - Used for treating an aneurysmal wall of a bodily vessel
    (claimed).
        ADVANTAGE - The device provides crosslinking solution that
    strengthens or toughens the aneurysmal wall by changing the nature of
    the wall, i.e. crosslinking the collagen in the wall.
        DESCRIPTION OF DRAWING(S) - The figure is a longitudinal
    cross-sectional view of the catheter.
        Catheter (31B)
        Occlusion balloons (34, 35)
        pp; 13 DwgNo 6/7
Derwent Class: B05; B07; P34
International Patent Class (Main): A61M-029/00
  Stent and graft device for treating aneurysmal wall of bodily vessel,
  contains crosslinking solution pumped out through lumen and port toward
  proximal end of catheter
Technology Focus:
...        Preferred components: The crosslinking solution is aldehyde
    solution, glutaraldehyde solution, or carbodiimide ...
...Preferred device: Occlusion balloons (34, 35) are provided for isolating
    the aneurysm . They comprise two or more balloon membranes.

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200273
File 344:Chinese Patents Abs Aug 1985-2002/Oct
File 347:JAPIO Oct 1976-2002/Jul(Updated 021104)
File 371:French Patents 1961-2002/BOPI 200209
Set     Items   Description
S1       1280   ANEURYSM?
S2     120055   CROSSLINK??? OR CROSS()LINK???
S3     113975   ALDEHYDE? OR ACETALDEHYDE OR PARALDEHYDE OR ACROLEIN OR BE-
             NZALDEHYDE OR FORMALDEHYDE OR FORMOCRESOL?
S4       5040   FURALDEHYDE OR GLUTARAL OR GLYCERALDEHYDE OR GLYOXAL OR PH-
             ENYLGLYOXAL OR PYRUVALDEHYDE OR MALONDIALDEHYDE
S5       8199   THIOBARBITURIC()ACID OR O()PHTHALDEHYDE OR RETINALDEHYDE OR
              CARBODIIMIDE OR CYANAMIDE OR CYANOGENAMIDE
S6          6   S1 AND S2 AND S3:S5


 6/6/2     (Item 2 from file: 348)
00673330
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TISSUE EQUIVALENTS

6/6/3 (Item 3 from file: 348)
00562508
Method for processing and preserving collagen-based tissues for transplantation.

6/6/4 (Item 1 from file: 349)
00940903 **Image available**
INHIBITORS OF INTEGRIN alpha"sub"vbeta"sub"6
Publication Year: 2002

6/6/5 (Item 2 from file: 349)
00806996 **Image available**
METHODS AND COMPOSITIONS FOR REGULATING LYMPHOCYTE ACTIVITY
Publication Year: 2001

6/6/7 (Item 4 from file: 349)
00510629
METHOD OF PROCESSING AND PRESERVING COLLAGEN BASED TISSUES
Publication Year: 1999

6/6/8 (Item 5 from file: 349)
00274329 **Image available**
TISSUE EQUIVALENTS
Publication Year: 1994

6/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01338132
Embolization device
Vorrichtung zur intravaskularen Embolisierung
Dispositif d'embolisation
PATENT ASSIGNEE:
Collagen Matrix, Inc., (3144011), 509 Commerce Street, Franklin Lakes, New Jersey 07869, (US), (Applicant designated States: all)
INVENTOR:
Li, Shu-Tung, 1 Kiowa Terrace, Oakland, New Jersey 07436, (US)
Lin, Horng-Ban, 9 Willow Drive, Randolph, New Jersey 07869, (US)
Yuen, Debbie, 125 Overlook Drive, Woodcliff Lake, New Jersey 07677, (US)
LEGAL REPRESENTATIVE:
Behnisch, Werner, Dr. (77851), Reinhard-Skuhra-Weise & Partner, Patentanwalte, Postfach 44 01 51, 80750 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1142535 A2 011010 (Basic)
APPLICATION (CC, No, Date): EP 2001108754 010406;
PRIORITY (CC, No, Date): US 196017 P 000407
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61B-017/12; A61L-031/04; A61L-031/12
ABSTRACT WORD COUNT: 53
NOTE: Figure number on first page: NONE
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count

CLAIMS A (English) 200141 528
SPEC A (English) 200141 3971
Total word count - document A 4499
Total word count - document B 0
Total word count - documents A + B 4499
...SPECIFICATION dried in air.
The collagen filaments is wound onto a Teflon(R) coated mandrel and crosslinked in a solution containing 0.05% glutaraldehyde to form a coil. The coil is thoroughly rinsed in distilled water to remove glutaraldehyde residues and dried in air. The thus obtained embolization device (103), containing 50-80% by...
...and 15 cm in length.
EXAMPLE 2. A method for using embolization device to occlude **aneurysms**
Arterial **aneurysms** are created in New Zealand White rabbits (4-5 kg) using a technique...

6/3,K/6 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00568739 **Image available**
EMBOLIZATION DEVICE
DISPOSITIF D'EMBOLISATION
Patent Applicant/Assignee:
WASHINGTON UNIVERSITY, 660 South Euclid, St. Louis, MO 63110, US, US (Residence), US (Nationality), (For all designated states except: US)
COOK BIOTECH INCORPORATED, 3055 Kent Avenue, West Lafayette, IN 47906, US, US (Residence), US (Nationality), (For all designated states except: US)
MED INSTITUTE INC, 1400 Cumberland Avenue, West Lafayette, IN 47906, US, US (Residence), US (Nationality), (For all designated states except: US)
Inventor(s):
MORAN Christopher J M D,
BLEYER Mark W,
KOZMA Thomas G,
PATEL Umesh H,
Patent Applicant/Inventor:
MORAN Christopher J M D, 12559 Amersham Court, Town & Country, MO 63141, US, US (Residence), US (Nationality)
BLEYER Mark W, 1849 Blackbird Court, West Lafayette, IN 47906, US, US (Residence), US (Nationality)
KOZMA Thomas G, 1917 East Foxmoor Lane, Lafayette, IN 47906, US, US (Residence), US (Nationality)
PATEL Umesh H, 1135 Kingswood Road South, West Lafayette, IN 47906, US, US (Residence), US (Nationality)
Legal Representative:
NESS Anton P (agent), P.O. Box 2269, Bloomington, IN 47402-2269, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200032112 A1 20000608 (WO 0032112)
Application: WO 99US28070 19991124 (PCT/WO US9928070)
Priority Application: US 98110434 19981201
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 10625
Fulltext Availability:
Detailed Description
Detailed Description
... synthetic materials, it can harbor microorganisms causing inf ection. 2 5 In the case of **aneurysm** treatment, an **aneurysm** is caused by a weakening of the vessel wall, which causes an invagination of the vessel wall. Blood flow is inhibited at the neck of the **aneurysm** due to turbulence caused by blood entering and exiting the lumen of the **aneurysm** . Current medical treatment of **aneurysms** include the use of metal coils, such as the FDA approved Gugliemi Detachable Coil, inserted into the lumen of the **aneurysm** . However, this platinum coil is relatively soft and does not provide a complete packing of the **aneurysm** lumen. It is not uncommon for the **aneurysm** to re-canalize, enlarge, and even rupture. Therefore, an **aneurysm** lumen filling device that packs the lumen sufficiently, is biocompatible, and promotes healing of the **aneurysm** would be well-received as reportedly approximately 28,000 patients suffer from intracranial **aneurysms** , of which 1 9,000 become severely disabled or die as a result of an **aneurysm** rupture. Furthermore, an embolization device that is soft enough to not puncture the vessel wall...
...Cohesive films of high tensile strength have been manufactured using collagen molecules or collagenbased materials. Aldehydes , however, have been generally utilized to cross - link the collagen molecules to produce films having high tensile strengths. With these types 1 5 of materials, the aldehydes can leech out of the film, e.g. upon hydrolysis. Because such residues are cytotoxic...

File 348:EUROPEAN PATENTS 1978-2002/Nov W02
File 349:PCT FULLTEXT 1979-2002/UB=20021114,UT=20021107

| Set | Items | Description |
|---|---|---|
| S1 | 3265 | **ANEURYSM**? |
| S2 | 91713 | CROSSLINK??? OR CROSS()LINK??? |
| S3 | 100514 | ALDEHYDE? OR ACETALDEHYDE OR PARALDEHYDE OR ACROLEIN OR BENZALDEHYDE OR FORMALDEHYDE OR FORMOCRESOL? |
| S4 | 10457 | FURALDEHYDE OR GLUTARAL OR GLYCERALDEHYDE OR GLYOXAL OR PHENYLGLYOXAL OR PYRUVALDEHYDE OR MALONDIALDEHYDE |
| S5 | 26563 | THIOBARBITURIC()ACID OR O()PHTHALDEHYDE OR RETINALDEHYDE OR CARBODIIMIDE OR CYANAMIDE OR CYANOGENAMIDE |
| **S6** | **8** | **S1(S)S2(S)S3:S5** |